A Reintroduction of Bighorn Sheep into the Sweetwater Rocks of Wyoming

Alfred Jacob Miller, *Formations of Rock near the Sweet Water, 1837*

SWEETWATER ROCKS
INITIATIVE

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History of Bighorn Sheep in the Sweetwater Rocks

Bighorn sheep are native to the Sweetwater Rocks and surrounding mountain ranges. As early as 1812, fur trader Robert Stuart reported the presence of wild sheep in central Wyoming (Honess and Frost 1942). Traveling along the route that eventually became the Oregon Trail, Stuart described "numerous flocks of ibex or bighorn" along the Platte River. He noted that mountainous country to the south, southwest, and east of Poison Spider Creek was occupied by "innumerable flocks" of wild sheep. In 1837 on his way to the Green River Rendezvous, Alfred Jacob Miller painted his oil on canvas titled "Formations of Rock near the Sweet Water" depicting bighorn sheep upon the cliffs. John C. Fremont, the "Great Pathfinder," harvested bighorn sheep in the vicinity of Devil's Gate during his expedition of 1842 (Fremont 1887). In 1878, a diary account by Edwin C. Johnson reported that bighorns were common in Platte Canyon, the Sweetwater Rocks, and Brown's Canyon (Beebe 1973). Similarly, a Mr. J. B. Gaynor of Thermopolis reported harvesting a bighorn ram near Savage Peak north of the Sun Ranch in 1881 (Anonymous 1931).

It is believed the Audubon subspecies of bighorn sheep inhabited the Sweetwater Rocks (Cowan 1940, Buechner 1960, Shackleton 1985). Following settlement of the lower Sweetwater River, market hunting, introduction of disease from livestock, and heavy domestic sheep grazing, resulted in the extirpation of bighorn sheep by 1907 (Cowan 1940, Honess and Frost 1942). Similarly, Audubon's sheep became extinct across their entire range in the early 1900s. One of the last accounts of this subspecies was described by Theodore Roosevelt in the Bighorn Mountains (Morris 1979). Rocky Mountain bighorn sheep have persisted in Wyoming to the present, although the subspecies' distribution was greatly restricted, and many individual populations were dramatically reduced as westward expansion and the introduction of domestic sheep reached a peak in the early 1920s (Honess and Frost 1942, Smith 1982, Ryder and Lanka 1997).

Beginning in the 1940s, the Wyoming Game and Fish Department (WGFD) began transplanting Rocky Mountain bighorn sheep into formerly occupied native habitats. Through the years, approximately 2,000 bighorns from Whiskey Mountain near Dubois were released into the Wind River Mountains, the Wyoming Range, the Bighorn Mountains, the Black Hills, the Laramie Mountains, the Snowy Range, the Sierra Madre Mountains, and 5 other western states (Hurley 1996). In most instances, transplants of these Rocky Mountain bighorns into former Audubon sheep habitats failed or were only marginally successful (Cook et al. 1990, Hengel et al. 1992, Easterly 1996, Hiatt 1997).

The WGFD attempted to re-establish bighorns in the Savage Peak area of the Sweetwater Rocks with three translocation efforts (WGFD 1950, Hiatt 1997). In 1944, seven desert bighorn sheep (0. c. nelsoni) from southern Nevada were released just south of Savage Peak. This is the only documented account of desert sheep being released into Wyoming. In 1949 and 1950, twenty Rocky Mountain bighorn sheep from Whiskey Basin were transplanted into the same area. Despite the extremely small founder herd, the population increased to a maximum of 40-50 animals during the 1960s. Following this initial increase, however, the population dwindled through the 1970s. By 1980, reports of resident bighorn sheep in the Sweetwater Rocks ceased. However, occasional sightings of

wandering animals were made by area residents through the 1990s.
A third attempt to re-establish bighorns in the Sweetwater Rocks was proposed in the mid-1980s. The proposal was presented to the public during development of the BLM's Lander Resource Management Plan. Following signing of the Plan in 1987, the BLM stated, "BLM will cooperate with the Wyoming Game and Fish Department, interested sportsmen, conservation groups, and adjacent landowners in efforts to develop a workable bighorn sheep re-introduction program for the Sweetwater Rocks area." However, strong landowner opposition to a transplant of bighorns at that time and changing Department management objectives for elk caused the proposal to be abandoned. Similarly, proposals for reintroduction were attempted again in 1999 and 2014, however, livestock producer sentiment and concerns ended the process.

This current effort to reintroduce bighorn sheep into the Sweetwater Rocks was proposed by the Pathfinder Ranches, one of the larger, deeded landowners within the perimeter of the proposed reintroduction area. Pathfinder Ranches representatives, formally requested that the Wyoming Game and Fish Commission direct the WGFD to proceed with the necessary assessments to determine if reintroduction of bighorn sheep into the Sweetwater Rocks was feasible. With support from the Wyoming Wild Sheep Foundation, National Wild Sheep Foundation, Wyoming Wildlife Federation, Wyoming Game and Fish Department, and other large landowners within the boundary of the Sweetwater Rocks, this effort strives to see the return of wild sheep to the Sweetwater Rocks where they belong and once thrived.

Timeline

Pre-1907 Innumerable herds of Bighorn sheep existed within the Sweetwater River and North Platte River drainages.

1907 Audubon bighorn sheep extirpated from the Sweetwater Rocks. Audubon bighorn sheep inhabited mountain ranges, badlands, and rim-rock breaks across eastern Wyoming, eastern Montana, and the badlands of North and South Dakota and Nebraska.

1944 Seven desert bighorn sheep (0. c. nelsoni) from southern Nevada were released just south of Savage Peak.

1949-50 Twenty Rocky Mountain bighorn sheep from Whiskey Basin were transplanted into the same area as the 1944 release.

1980 Reports of resident bighorn sheep in the Sweetwater Rocks ceased.

1999 & 2014 Wyoming Game and Fish Department proposes the reintroduction of up to 50 low elevation, non-migratory bighorn sheep from similar habitats in Wyoming (Devil's Gate, Seminoe Mountains) or from other states, such as Oregon, Nevada or California. The Department noted that "a vast majority of the potential habitats within the Sweetwater Rocks is on BLM or State land."

2021 Pathfinder Ranches formally requests that the Wyoming Game and Fish Commission direct the Wyoming Game and Fish Department to begin the habitat and other reviews necessary to support the expedient reintroduction of bighorn sheep into the Sweetwater Rocks of central Wyoming.

Sweetwater Rocks Specifics

The Sweetwater Rocks is defined as a 73,101-acre land area in central Wyoming, stretching east to west from Devil's Gate to near Sage Hen Creek. The Sweetwater River parallels the Sweetwater Rocks along its southern boundary. This perimeter is based on the habitat suitability model and seasonal probability of use model defined in the 2021 Research Brief – An assessment of bighorn sheep in the Sweetwater Rocks (Wagler & Monteith, 2021).

The Sweetwater Rocks consists of high-desert habitat dominated by rocky outcrops and sagebrush grasslands. Elevations range from 5,900 ft along the Sweetwater River to the 7,959-foot McIntosh Peak. Other prominent land features include Devil's Gate, Split Rock, Lankin Dome, Savage Peak, and Martin's Cove. The Sweetwater Rocks are located within the Granite Mountains.

Land ownership within the Sweetwater Rocks consists of federal (BLM; 68.3%), state (6.1%), and private (25.6%) land. There are seven private landowners within the proposed reintroduction area. Nineteen BLM cattle grazing allotments overlap the proposed reintroduction area ranging from less than 1% of the allotment within the Sweetwater Rocks to 99% of the allotment within the perimeter. These 19 cattle grazing allotments total 42,106 acres within the Sweetwater Rocks, leaving 30,995 acres, or 42.4%, outside and not included within a federal grazing allotment. There are no permitted federal grazing allotments for domestic sheep within the identified bighorn sheep habitat perimeter.

The Sweetwater Rocks area is located within the larger Bighorn Sheep Cooperative Review Area of Central Wyoming. Cooperative Review Areas are geographic locations with historic bighorn sheep occupation that can and have been home to successful reintroductions. Other Cooperative Review Areas in Wyoming include the Ferris and Seminoe Mountains with the Ferris-Seminoe herd, the Sierra Madre and Snowy Ranges which are home to the Encampment River and Douglas Creek herds, and the Laramie Range with the Laramie Peak herd.

Wyoming Game and Fish Department Information

Upon a successful reintroduction, the Wyoming Game and Fish Department (WGFD) will manage a population of bighorn sheep in a newly established "Sweetwater Rocks Herd Unit." Like other bighorn sheep herds across the state, interactions with livestock, live and stored crops, habitat utilization, and seasonal distribution will be monitored.

Forage data collected within the Sweetwater Rocks indicates that there is sufficient food and habitat to support more than 400 bighorn sheep. Wild sheep are not expected to compete with other big game species or livestock for forage in this area due to their specific habitat needs. The identified bighorn sheep core habitats in the Sweetwater Rocks are located in rocky remote terrain outside of and not included within any federal grazing allotment.

Successful reintroduction and management of the Sweetwater Rocks Herd could restore sustainable hunting opportunities for a highly sought-after species that has been absent from the area for nearly 50 years. Visitors who come to the area for its rich western history at Independence Rock, Split Rock, Devil's Gate, the Mormon Handcart Visitor's Center, and the Oregon Trail could also have the incredible opportunity to view an iconic species that was once integral to this landscape.

As per current protocol, the WGFD maintains adequate separation between domestic sheep flocks and wild sheep herds by culling wandering wild sheep that have had potential contact with domestic sheep. Since 2003, the WGFD has removed 45 wild sheep statewide that would pose a threat to wild herds should they return with infectious diseases.

The WGFD lists bighorn sheep as a Species of Greatest Conservation Need based on the Native Species Status Matrix in the Wyoming State Wildlife Action Plan – 2017. According to the Plan, their "population size or distribution is restricted or declining."

Risk of Contact between Domestic and Wild Sheep

Five domestic sheep allotments were identified as having a potential risk of contact with wandering bighorn sheep from reintroduced bighorns in the Sweetwater Rocks. However, no domestic sheep allotments exist within the perimeter of the suitable bighorn sheep habitat. Of these five allotments, only two currently stock domestic sheep. A Risk of Contact analysis performed on these allotments for the initial translocated population of 40 female and 10 male bighorn sheep determined a rate of 0.03 contacts per year, or one contact every 33 years. If all authorized domestic sheep grazing allotments were stocked with sheep, the predicted contact rate would increase from 0.03 to 0.12 contacts per year for the same population size.

Twenty-two federal domestic sheep allotments exist within a 30-mile buffer of the Sweetwater Rocks. Only five of the 22 allotments are at risk of contact with the initial translocated bighorn sheep from the Sweetwater Rocks, with the number of contacts per year ranging from 0.01 (one contact per 100 years) to 0.06 (one contact per 16.6 years). The allotment with the greatest risk of contact is the Whiskey Peak In-common Allotment, held by Pathfinder Ranches LLC. This allotment has not been stocked with domestic sheep specifically to support the reintroduction of bighorn sheep into the Sweetwater Rocks.

From Wagler, Monteith (2021): To provide some context to what these levels of risk might mean in a real bighorn sheep population, we compared the results of the risk of contact tool between the Sweetwater Rocks and Ferris-Seminoe. The predicted yearly contact rate for a population of 300 is 0.17 for Sweetwater Rocks and 0.37 for the Ferris-Seminoe (currently ~300 bighorn sheep). Under current grazing activity and regulations, the Sweetwater Rocks bighorn sheep would face lower risk of contact than the Ferris-Seminoe bighorn sheep currently face.

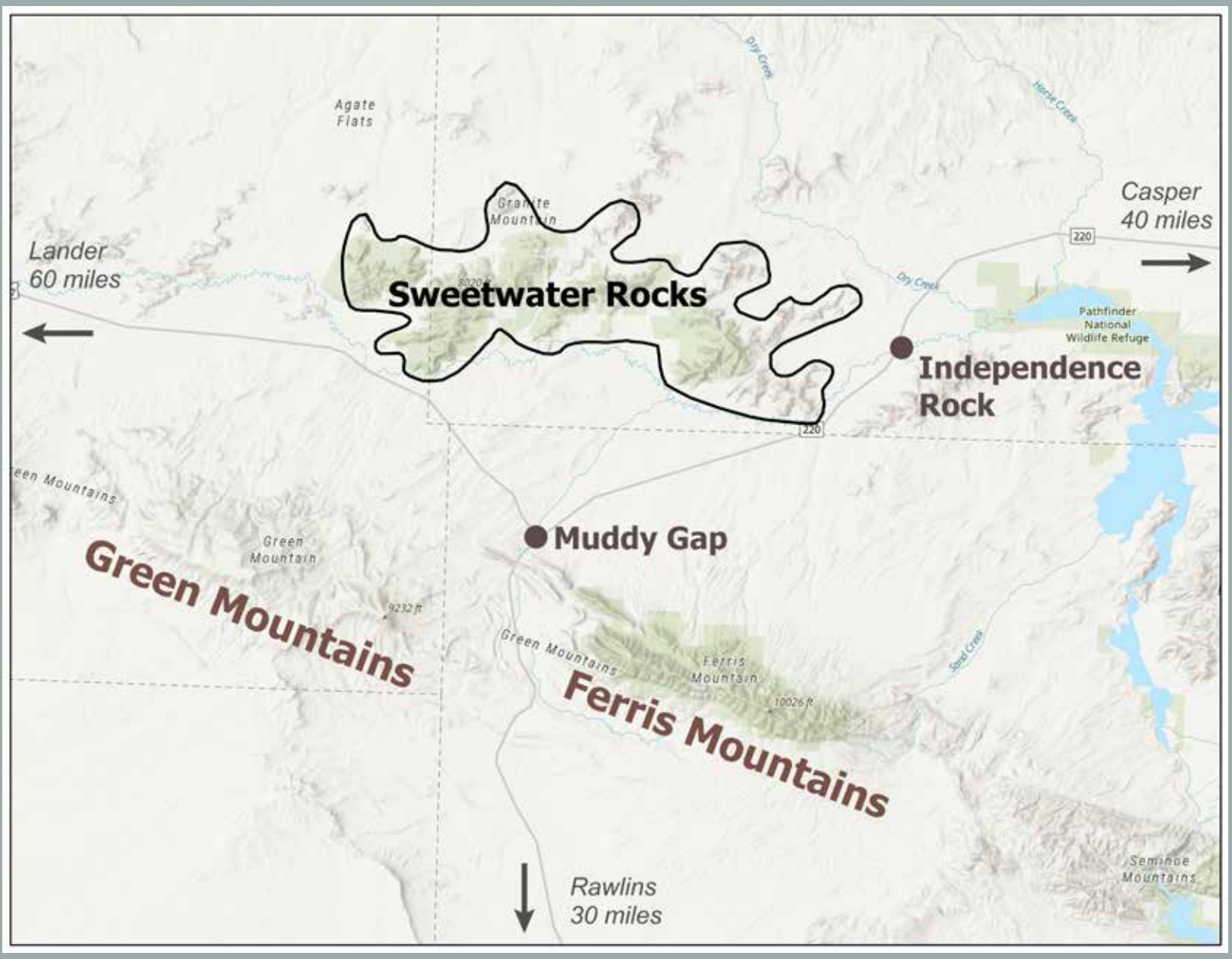
Bighorn Sheep and Livestock Grazing on BLM lands

Bighorn sheep on federal land do not alone constitute any special federal actions by their reintroduction or ongoing management. This includes any alterations to cattle grazing leases within the 19 federal allotments within the Sweetwater Rocks perimeter.

The Bureau of Land Management (BLM) is authorized to manage livestock grazing on the land it administers under the principles of multiple use and sustained yield. If livestock grazing practices are found to be contributing factors to the negative health of the grazing allotment, corrective actions consistent with the Wyoming Standards and Guidelines will be developed and implemented before the next grazing season in accordance with 43 CFR 4180.

On a continuing basis, the Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management (1997) will direct the on-the-ground management of public lands. They will serve to focus the ongoing development and implementation of plans toward the maintenance or the attainment of healthy rangelands. Wyoming rangelands support a variety of uses that are of significant economic importance to the State and its communities. These include oil and gas production, mining, recreation and tourism, hunting and fishing, wildlife viewing, and livestock grazing.

Conservation of native species typically involves an increase in investment into their habitat, which has a direct benefit to livestock grazing within the same area. For bighorn sheep, it is anticipated that additional water tanks and springs will be developed throughout the Sweetwater Rocks, along with the replacement of dilapidated fencing with new wildlife-friendly fencing. Increased predator control will likely occur to ensure survivability of the reestablished bighorn sheep. Additionally, invasive weeds like cheatgrass will be targeted in these areas to increase native forage for both wildlife and livestock. Funding sources that were otherwise absent from the Sweetwater Rocks become available to the area upon the arrival of bighorn sheep.



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